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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,362	12/11/2003	Fabrice J. Malard	5658/981	2806

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EXAMINER	
COHEN, AMY R	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,362	MALARD ET AL.	
	Examiner	Art Unit	
	Amy R Cohen	2859	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-84* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The continuity statement in the first paragraph on the first page of the specification should be amended to replace "U. S. Patent No. 10/141,392, filed May 7, 2002 (pending)" with the respective patent number, i.e., now U. S. Patent Number 6,735,879.

Appropriate correction is required.

Claim Objections

2. Claims 4, 22, 48 are objected to because of the following informalities:

Claim 4, line 3 "first plane" should read --first planar--.

Claim 22, line 3 "the fan" lacks antecedent basis in the claim.

Claim 48 appears to be a repeated claim of claim 47.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 46-49, 51, 52, 54-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Fiebig et al. (U. S. Patent No. 6,293,024).

Fiebig et al. teaches a line generating device (10), comprising: a housing (11) comprising a pin (30) mounted on a face of the housing (Figs. 2 and 3), wherein the pin is movable from a first position, wherein the pin is incapable of contacting a surface exterior of the line generating device, to a second position wherein the pin is capable of contacting the surface (Col 2, lines 40-58); a light source (20) mounted within the housing; and a power supply (27) connected to the light source.

Fiebig et al. teaches the device comprising at least one lens (21) that receives light from the light source.

Fiebig et al. teaches the device wherein the light source comprises a laser light (20) source.

Fiebig et al. teaches the device comprising at least one reference level (14) on the housing.

Fiebig et al. teaches the device wherein the housing defines an opening (Fig. 3) through which the pin extends through when moving from the first position to the second position (Col 2, lines 40-58).

Fiebig et al. teaches the device wherein the pin is mounted to the housing (Col 2, lines 40-58).

Fiebig et al. teaches the device wherein the pin is at least partially retractable into the housing (Figs. 2 and 3 and Col 2, lines 40-58).

Fiebig et al. teaches the device wherein the pin moves along an axis from the first position to the second position (Figs. 2 and 3 and Col 2, lines 40-58).

5. Claims 61-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Goodrich et al. (U. S. Patent No. 6,502,319).

Goodrich et al. teaches a method for projecting a fan-shaped laser light generated from a line generating device onto a vertical surface, the method comprising: attaching the line generating device to the vertical surface (48), wherein gravity acts on the line generating device parallel to the vertical surface (Col 3, lines 9-42); focusing the light into a fan shape that substantially lies within a plane (Col 3, lines 9-42); projecting the fan-shaped light in a direction of propagation that is oriented an at angle with respect to the plane (Figs. 10 and 11 and Col 3, lines 9-42).

Goodrich et al. teaches the method wherein the direction of propagation is oriented at about 90° with respect to the plane (Fig. 10).

Goodrich et al. teaches the method wherein the light is substantially monochromatic (Col 2, lines 40-49).

Goodrich et al. teaches the method comprising forming a line on a surface of interest (Col 4, lines 30-48).

Goodrich et al. teaches the method comprising pivoting the fan-shaped light onto the surface of interest (Figs. 10 and 11, light is pivoted between the positions in each figure).

Goodrich et al. teaches the method comprising orienting and leveling the fan-shaped light (Col 4, lines 30-61 and Col 5, lines 1-6).

6. Claims 74-79 are rejected under 35 U.S.C. 102(b) as being anticipated by Dong (U. S. Patent No. 5,864,956).

Dong teaches a method for projecting a fan-shaped laser light generated from a line generating device, the method comprising: attaching the line generating device to a surface (Col

1, lines 28-50); focusing a light into a fan shape that substantially lies within a plane (Col 2, lines 35-39); projecting the fan-shaped light in a direction of propagation that is oriented at an angle with respect to the plane (Col 2, lines 35-57); and removing the line generating device from the surface (Col 1, lines 28-50, removing the device would happen upon completion of the task of using the device).

Dong teaches the method wherein the direction of propagation is oriented at about 90° (Figs. 2-4).

Dong teaches the method wherein the light is substantially monochromatic (Col 2, lines 9-14).

Dong teaches the method comprising forming a line on a surface of interest (Figs. 2-4).

Dong teaches the method comprising pivoting the fan-shaped light onto the surface of interest (Col 2, lines 35-57).

Dong teaches the method comprising orienting the fan-shaped light (Col 2, lines 32-57).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 2, 4-10, 15, 17, 19-22, 25-29, 34, 36-39, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiebig et al. (U. S. Patent No. 6,293,024) in view of Dong (U. S. Patent No. 5,864,956).

Fiebig et al. discloses the line generating device as described above in paragraph 4.

Fiebig et al. discloses the device wherein the housing comprises a support face (13) that substantially extends along a first planar surface.

Fiebig et al. discloses the device wherein the light projects a line in a direction generally parallel to the first planar surface, the line extending in a direction of propagation of the light (Col 2, lines 30-39).

Fiebig et al. discloses the device wherein the at least one reference level comprises a bubble level (Fig. 2).

Fiebig et al. does not disclose a line generating device wherein the projecting lens projects the light in the shape of a fan; wherein the fan lies substantially within a second planar surface that intersects the first plane surface at an angle; wherein the angle is about 90°.

Dong discloses a line generative device comprising a housing (7); a light source (2) mounted within the housing; a power supply (5) connected to the light source; a projection lens that received light and projects the light in the shape of a fan (Figs. 2-4 and Col 2, lines 1-14).

Dong discloses the line generating device wherein the projecting lens projects the light in the shape of a fan (Figs. 2-4); wherein the fan lies substantially within a second planar surface that intersects the first plane surface at an angle (Figs. 2-4); wherein the angle is about 90° (Figs. 2-4).

Dong discloses the device wherein the light projects a line in a direction generally parallel to the first planar surface, the line extending in a direction of propagation of the light (Figs. 2-4).

Dong discloses the device wherein the power supply is a battery (5) mounted within the housing and switchably (4) connected to the light source.

Dong discloses the device wherein the at least one reference level comprises two bubble levels (8) oriented at right angles to each other.

Dong discloses the device comprising an aperture (Fig. 1A, where lens 1 is) in the housing.

Dong discloses the device wherein the projection lens is made from glass or plastic (Col 2, lines 4-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the line generating device of Fiebig et al., to include a fan-shaped beam and at least two bubble levels, as taught by Dong, so that a user could generate a line extending along the direction of propagation and a line perpendicular to the direction of propagation (Dong, Fig. 4, middle laser beam) and so that the device could be leveled in more than one direction, using multiple bubble levels.

9. Claims 1-3, 11-14, 22, 24, 30-33, 46, 48, 50, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiebig et al. in view of Goodrich et al. (U. S. Patent No. 6,502,319).

Fiebig et al. discloses the line generating device as described above in paragraph 4.

Fiebig et al. does not disclose a line generating device wherein the projecting lens projects the light in the shape of a fan; wherein the laser beam has an asymmetric intensity pattern; wherein the light in the shape of a fan is projectable as a visible line extending at least about 5 lengths of the housing from the housing; comprising a collimating optics that receives light from the light source and focuses the light into an ovate shape for the projecting lens.

Goodrich et al. discloses a line generating device comprising a housing (24); a light source (15) mounted within the housing; a power supply (39) connected to the light source; a projection lens (20) that receives light and projects the light in the shape of a fan (Figs. 5-17); at

least one reference level (46, 50) on an outside of the housing; wherein the light source generates a laser beam (2); wherein the laser beam has an asymmetric intensity pattern (Col 2, line 64-Col 3, line 8 and Col 3, lines 47-56); wherein the light in the shape of a fan is projectable as a visible line extending at least about 5 lengths of the housing from the housing (Col 3, lines 33-43, the entire length of the stud would be at least 5 times the length of the housing); comprising a collimating optics that receives light from the light source and focuses the light into an ovate shape for the projecting lens (Figs. 13-15 and Col 3, lines 44-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the line generating device of Fiebig et al. to project the light in the shape of a fan with an asymmetric pattern, as taught by Goodrich et al., so that a user would have a plane with which to level a device and so that the line of the laser would be visible over a length of the fan (Goodrich et al., Col 3, lines 47-56).

Regarding the radiused corner: Fiebig et al. and Goodrich et al. disclose a laser device where the optical system includes a lens which produces a fan-shaped, asymmetric beam of light. However, to choose a radius of 0.030 to about 0.060 inches or 0.047 inches, absent any criticality, is only considered to be the "optimum" value of the radiused corner, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See ***In re Boesch***, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Fiebig et al. and Goodrich et al. to have the radius be of 0.030 to about 0.060 inches or 0.047 inches so

that a fan shaped beam of the device would be compact while providing the shape and intensity needed.

10. Claims 68-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodrich et al. in view of Underberg (U. S. Patent No. 5,208,438).

Goodrich et al. discloses the method of aligning an object as described above in paragraph 5; comprising focusing the light into a fan-shaped beam offset from the surface by a distance (Figs. 10 and 11 and Col 4, lines 30-61).

Goodrich et al. does not disclose a method of aligning an object comprising generating a light along a direction of propagation so that a line is formed along a first planar surface, wherein the line is interruptible in that should an impediment be positioned on the line, the line will be present on either side of the impediment; and placing an object so that a portion of the object is aligned by the light.

Underberg discloses a method of aligning an object with a light beam generated from a line generating device onto a vertical surface, comprising: generating a light along a direction of propagation so that a line is formed along a first planar surface, wherein the line is interruptible in that should an impediment be positioned on the line, the line will be present on either side of the impediment (Col 4, lines 14-58); and placing an object so that a portion of the object is aligned by the light (Figs. 1 and 2 and Col 4, lines 14-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Goodrich et al. to include wherein the line is interruptible, as taught by Underberg, so that an object could be positioned along the length of the beam created by the line generating device, while maintaining the beam.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 2, 4-10, 16-23, 25-29, 35-52, 54-84 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-54 of U.S. Patent No. 6,735,879. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the subject matter claimed in claims 1, 2, 4-10, 16-23, 25-29, 35-52, 54-84 in the instant application are claimed in claims 1-54 of the patent.

For example, claim 1 of this application claims: a line generating device, comprising: a housing; a light source mounted within the housing; a power supply connected to the light source; a projection lens that receives light and projects the light in the shape of a fan; at least one reference level on an outside of the housing; and a pin that is movable from a first position, wherein the pin is incapable of contacting a surface exterior of the line generating device, to a second position wherein the pin is capable of contacting the surface; these limitations are claimed in claims 1-54 of the US Patent. The same reasoning holds for the rest of the independent and dependent claims 2, 4-10, 16-23, 25-29, 35-52, 54-84 of this application.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patent discloses a leveling device Webb (U. S. Patent No. 5,519,942).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy R Cohen whose telephone number is (571) 272-2238. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARC
May 25, 2004

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